constituent encoders, after an encoding of information bits by the two or more constituent encoders;

transmitting tail output bits from a first X(t) output branch and from a second $Y_0(t)$ output branch during trellis termination of a first of the two or more constituent encoders; and

transmitting tail output bits from a third X'(t) output branch and from a fourth $Y_0'(t)$ output branch during trellis termination of a second of the two or more constituent encoders.

9. A method as claimed in claim 8, wherein said generating includes:

puncturing one or more tail output bits such that 1/R tail output bits are transmitted for each of a plurality of trellis branches, wherein R is a turbo code rate employed by the turbo encoder during an information bit transmission.

10. A method as claimed in claim 8, wherein:

said generating is performed simultaneously at each of the two or more constituent encoders, wherein tail input bits from a first constituent encoder are generated at same clock cycles from a second constituent encoder.

11. A method as claimed in claim 8, wherein:

said generating is performed consecutively at each of the two or more constituent encoders, wherein tail input bits from a first constituent encoder are generated at different clock cycles than tail input bits from a second constituent encoder.

12. A method for terminating two or more constituent encoders of a turbo encoder employing a turbo code, the method comprising:

generating tail input bits at each of two or more constituent encoders by deriving the tail input bits from each of the two or more constituent encoders separately for each constituent encoder from a contents of shift registers within each of the two or more constituent encoders, after an encoding of information bits by the two or more constituent encoders; and

transmitting tail output bits from certain output branches of said two or more constituent encoders during trellis termination of said two or more constituent encoders.

13. A method as claimed in claim 12, wherein:

said transmitting transmits said tail output sent from an output branch of one of the two or more constituent encoders that is used during information bit transmission.

14. A method as claimed in claim 12, wherein said transmitting comprises:

transmitting tail output bits from a first X(t) output branch and from a second $Y_0(t)$ output branch during trellis termination of a first of the two or more constituent encoders; and

transmitting tail output bits from a third X'(t) output branch and from a fourth $Y_0'(t)$ output branch during trellis termination of a second of the two or more constituent encoders.

15. A method as claimed in claim 12, wherein:

when the turbo encoder is employed as a rate 1/3 turbo encoder, said transmitting comprises:

transmitting tail output bits from a first X(t) output branch, and a second $Y_0(t)$ output branch, during trellis termination of a first of the two or more constituent encoders;

re-transmitting tail output bits from the first X(t) output branch during trellis termination of the first of the two or more constituent encoders;

transmitting tail output bits from a third X'(t) output branch and from a fourth Y_0'(t) output branch, during trellis termination of a second of the two or more constituent encoders; and

re-transmitting tail output bits from the third X'(t) output branch during trellis termination of the second of the two or more constituent encoders.

16. A method as claimed in claim 12, wherein:

when the turbo encoder is employed as a rate 1/4 turbo encoder, said transmitting comprises:

transmitting tail output bits from a first X(t) output branch, a second Y_0(t) output branch, and a third Y_1(t) output branch during trellis termination of a first of the two or more constituent encoders;

re-transmitting tail output bits from the first X(t) output branch during trellis termination of the first of the two or more constituent encoders;

transmitting tail output bits from a fourth X'(t) output branch, a fifth Y_0'(t) output branch, and a sixth Y_1'(t) output branch during trellis termination of a second of the two or more constituent encoders; and

re-transmitting tail output bits from the fourth X'(t) output branch during trellis termination of the second of the two or more constituent encoders.

17. A method as claimed in claim 12, wherein:

said generating is performed simultaneously at each of the two or more constituent encoders, wherein tail input bits from a first constituent encoder are generated at same clock cycles from a second constituent encoder.

18. A method as claimed in claim 12, wherein:

said generating is performed consecutively at each of the two or more constituent encoders, wherein tail input bits from a first constituent encoder are generated at different clock cycles than tail input bits from a second constituent encoder.

19. A method as claimed in claim 12, wherein said generating includes:

puncturing one or more tail output bits such that 1/R tail output bits are transmitted for each of a plurality of trellis branches, wherein R is a turbo code rate employed by the turbo encoder during an information bit transmission.

20. A system for terminating two or more constituent encoders of a turbo encoder employing a turbo code, the system comprising:

a generator, adapted to generate tail input bits at each of two or more constituent encoders by deriving the tail input bits from each of the two or more constituent encoders separately for each constituent encoder from a contents of shift registers within each of the two or more constituent encoders, after an encoding of information bits by the two or more constituent encoders;

a transmitter, adapted to transmit tail output bits from a first X(t) output branch and from a second $Y_0(t)$ output branch during trellis termination of a first of the two or more constituent encoders, and to transmit tail output bits from a third X'(t) output branch and from

a fourth $Y_0'(t)$ output branch during trellis termination of a second of the two or more constituent encoders.

21. A system as claimed in claim 20, wherein said generator includes:

a puncturer, adapted to puncture one or more tail output bits such that 1/R tail output bits are transmitted for each of a plurality of trellis branches, wherein R is a turbo code rate employed by the turbo encoder during an information bit transmission.

22. A system as claimed in claim 20, wherein:

said generator is adapted to perform said generating simultaneously at each of the two or more constituent encoders, wherein tail input bits from a first constituent encoder are generated at same clock cycles from a second constituent encoder.

23. A system as claimed in claim 20, wherein:

said generator is adapted to perform said generating consecutively at each of the two or more constituent encoders, wherein tail input bits from a first constituent encoder are generated at different clock cycles than tail input bits from a second constituent encoder.

24. A system for terminating two or more constituent encoders of a turbo encoder employing a turbo code, the system comprising:

a generator, adapted to generate tail input bits at each of two or more constituent encoders by deriving the tail input bits from each of the two or more constituent encoders separately for each constituent encoder from a contents of shift registers within each of the

two or more constituent encoders, after an encoding of information bits by the two or more constituent encoders; and

a transmitter, adapted to transmit tail output bits from certain output branches of said two or more constituent encoders during trellis termination of said two or more constituent encoders.

25. A system as claimed in claim 24, wherein:

said transmitter is adapted to transmit said tail output sent from an output branch of one of the two or more constituent encoders that is used during information bit transmission.

26. A system as claimed in claim 24, wherein said transmitter is adapted to perform the following operations:

transmitting tail output bits from a first X(t) output branch and from a second $Y_0(t)$ output branch during trellis termination of a first of the two or more constituent encoders; and

transmitting tail output bits from a third X'(t) output branch and from a fourth $Y_0'(t)$ output branch during trellis termination of a second of the two or more constituent encoders.

27. A system as claimed in claim 24, wherein:

when the turbo encoder is employed as a rate 1/3 turbo encoder, said transmitter is adapted to perform the following operations:

transmitting tail output bits from a first X(t) output branch, and a second $Y_0(t)$ output branch, during trellis termination of a first of the two or more constituent encoders;

re-transmitting tail output bits from the first X(t) output branch during trellis termination of the first of the two or more constituent encoders;

transmitting tail output bits from a third $X'(t)$ output branch and from a fourth $Y_0'(t)$ output branch, during trellis termination of a second of the two or more constituent encoders; and

re-transmitting tail output bits from the third $X'(t)$ output branch during trellis termination of the second of the two or more constituent encoders.

28. A system as claimed in claim 24, wherein:

when the turbo encoder is employed as a rate 1/4 turbo encoder, said transmitter performs the following operations:

transmitting tail output bits from a first $X(t)$ output branch, a second $Y_0(t)$ output branch, and a third $Y_1(t)$ output branch during trellis termination of a first of the two or more constituent encoders;

re-transmitting tail output bits from the first $X(t)$ output branch during trellis termination of the first of the two or more constituent encoders;

transmitting tail output bits from a fourth $X'(t)$ output branch, a fifth $Y_0'(t)$ output branch, and a sixth $Y_1'(t)$ output branch during trellis termination of a second of the two or more constituent encoders; and

re-transmitting tail output bits from the fourth $X'(t)$ output branch during trellis termination of the second of the two or more constituent encoders.

29. A system as claimed in claim 24, wherein:

said generator is adapted to perform said generating is performed simultaneously at each of the two or more constituent encoders, wherein tail input bits from a first constituent encoder are generated at same clock cycles from a second constituent encoder.

30. A system as claimed in claim 24, wherein:

said generator is adapted to perform said generating is performed consecutively at each of the two or more constituent encoders, wherein tail input bits from a first constituent encoder are generated at different clock cycles than tail input bits from a second constituent encoder.

31. A system as claimed in claim 24, wherein said generator includes:

a puncturer, adapted to puncture one or more tail output bits such that 1/R tail output bits are transmitted for each of a plurality of trellis branches, wherein R is a turbo code rate employed by the turbo encoder during an information bit transmission.

REMARKS

Entry of the above amendments, and early and favorable consideration on the merits are respectfully requested. Upon entry of this Preliminary Amendment, claims 8-31 will be pending.